

Key factors that influence students' motivation to learn

Implications for teaching

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KEY POINTS

- Students learn and achieve optimally when they:
 - expect to do well at learning tasks,
 - believe that learning is useful/relevant to them
 - do not perceive engagement in learning as being too costly (e.g., too time consuming, too difficult, etc.).

To strengthen students' motivation to learn, teachers could use a set of strategies that are applicable at all school levels and could be adapted to suit all curriculum areas.

Multiple motivation factors work together to influence how students learn and achieve. Motivation can be enhanced by instruction that supports learning-related expectancies of success and strengthens perceptions that learning is useful. It also helps to keep in check students' beliefs that learning involves unreasonable effort, emotional, or opportunity costs. This article provides a set of strategies that teachers could use in their instruction both to strengthen students' confidence in their abilities and their utility/relevance beliefs, and to reduce their perceptions that learning requires incurring significant costs. These strategies, which are based on insights from both conceptual and empirical research, including our own research, could also help teachers reflect on their pedagogical practice.

Motivation is complex and involves multiple factors. These factors work together to influence how students think, feel, communicate, and behave in classrooms and beyond (Higgins, 2012). That is, the effects of each motivation factor on students' learning and attainment depends on the strength (or lack of strength) of other key motivation factors (Hattie et al., 2020). Therefore, to create learning environments where students are invested in their learning and acquire important skills, teachers need to a) understand the key consequences of motivation factors working together, and b) use this new understanding to design instruction in ways that support students' motivation to learn. In this article, we aim to provide information that is critical to the attainment of both focuses. We do so by offering a set of strategies that reflect insights from both conceptual and substantive research, including our own research.

Strong expectancies of success together with perceptions of usefulness and manageable cost support student learning

Students learn effectively when they think they can perform successfully in learning tasks (i.e., have high expectancies of success), believe that learning helps them achieve their goals (i.e., regard learning as valuable), and they perceive that studying is not overly taxing in terms of the effort required, the emotional cost involved, or the opportunities that they forgo when they undertake learning tasks (i.e., consider the "cost" of learning is not too high) (Eccles & Wigfield, 2020). In contrast, students struggle in school and become disengaged when they have doubts they can do well in learning activities, perceive learning tasks as

pointless, and consider that learning/studying is tiring, frustrating, and/or encroaching in other important aspects of their lives. These three key motivation factors (i.e., expectancies, value, and cost) work together to influence what students do in learning settings (Eccles & Wigfield, 2020). For example, when a student believes he can do well in mathematics and finds he learns easily but does not think that mathematics is useful to him, he is unlikely to be fully engaged with his learning and develop an enduring interest in mathematics. In contrast, another student may perceive that she has a decent chance to do well in mathematics when she puts her mind to it and finds mathematics useful. At the same time, she thinks that working on mathematics prevents her from spending quality time with her friends. If this second student manages to keep perceptions of cost under control (e.g., by meeting friends after she is done studying; by doing schoolwork together with friends), she is likely to be motivated to learn mathematics.

Our recent research (Hodis & Hodis, 2020) has explored how students' expectancies of success, utility value, and cost beliefs regarding mathematics work together. Data for this research were collected from 463 secondary school students from New Zealand. We found that students who expected to do well in mathematics thought that learning mathematics was useful, and believed that working on mathematics-related tasks did not take too much time from other activities they enjoyed. They had an optimal motivation to learn. In addition, although these students were quite competitive, they were not afraid to fail at tasks. Consistent with this positive motivation outlook, these students reported high levels of satisfaction in communicating with their mathematics teachers. In contrast, for students who

were less confident they could do well in mathematics and did not perceive mathematics as useful, high levels of competitiveness were associated with elevated fear of failure. Unsurprisingly, students sharing this suboptimal motivation outlook also reported low levels of satisfaction in communicating with their mathematics teachers.

These results illustrate a key theoretical tenet, namely that no motivation factor operates in isolation from other important motivation factors (Hattie et al., 2020; Higgins, 2012). Specifically, wanting to compete with other students is likely to have detrimental effects on motivation to learn and learning engagement when accompanied by lack of confidence in one's ability and a perception that learning is not useful. In these circumstances, high competitiveness is combined with being afraid to fail and having unsatisfactory communication with one's teacher, and is associated with patterns of behaviour and thinking that hamper learning and attainment. In contrast, when students are confident in their ability to do well and recognise the value of their learning, being competitive is not associated with a concerning motivation outlook.

These findings underline that motivation factors work together to influence student outcomes (Hattie et al., 2020; Higgins, 2012). In addition, they suggest that strengthening student learning and achievement requires supporting their confidence beliefs and perceptions of value/relevance and pushing back against the idea that learning involves unbearable costs (Eccles & Wigfield, 2020; Hodis & Hodis, 2020).

Three studies conducted in New Zealand (Hodis, 2018, 2020; Hodis & Hodis, 2015)—and involving large samples of secondary school students ($N = 5,732$; $N = 3,615$; $N = 463$, respectively)—identified some key predictors of expectancies of success in learning settings. Specifically, this corpus of research revealed that expectancies of success in learning settings are high when students are motivated to achieve their ideals, focus on positive aspects of their experiences, study to fulfil their aspirations, and have meaningful communication with their teachers. Importantly, as students tend to value more aspects they expect to do well at (Eccles & Wigfield, 2020; Hodis & Hodis, 2015), the factors that support expectancies of success are likely to both facilitate strong relevance/utility beliefs and buffer against elevated perceptions of learning-related costs.

The findings we highlighted above have important implications for teaching. To translate these implications into actionable information we reflected upon the significance of the findings for teaching and learning. Subsequently, we developed a set of strategies teachers could use in their classes to support students' expectancies of success and value beliefs and limit their perceptions of the cost associated with learning/studying.

Strategies teachers could use to support students' expectancies of success and value beliefs and limit perceptions of cost

Strategy 1. Provide clear explanations of what each learning tasks/assignment entails.

Strategy 2. Break up long or complex tasks into smaller chunks that can be attempted in different learning sessions. Encourage students to regard a “big” assignment as nothing more than a sequence of achievable steps. Taken together, the first two strategies are germane to plant the seeds for students to believe they can manage the (clear and explicitly stated) requirements of the task. In turn, this belief acts as a catalyst for strengthening their confidence that they can do the task while supporting a realistic (rather than hyper-inflated or unrealistically low) assessment of the time and effort needed to do the task.

Strategy 3. Make explicit what “doing well” or “success” at a given task looks like. This strategy will reduce students' perceptions of emotional cost (e.g., anxiety; “Am I on the right track?”) and increase their confidence that they could do the task.

Strategy 4. Communicate clear expectations about task work and performance. This strategy dovetails with the previous one to support expectancies of success. In addition, it helps students develop realistic perceptions of effort cost.

Strategy 5. Ensure that all foundational skills and subskills that are required for completing a complex task are in place. Consider providing a refresher if students' skills (or subskills) appear “rusty” in some areas.

Strategy 6. Be ready to provide scaffolding that helps students navigate difficult or juncture points successfully. As students are likely to approach tasks from different perspectives and bring to class a variety of skill levels, universal provision of scaffolding may not be beneficial to all students. On the one hand, students who are confident and are making good progress with the task are likely to perceive scaffolding as unnecessary and perhaps even annoying. On the other hand, there will be students for whom provision of structured help (e.g., via scaffolding) is essential for successful navigation of some tasks/ assignments.

Strategy 7. Communicate consistently to students that you are available to offer clarifications or assistance if they encounter difficulties they cannot overcome. Put in place clear expectations that students need to make genuine efforts to get around sticky points prior to asking

for assistance. When you provide help, do it in a way that acknowledges students' perspectives and work and supports their ownership of the task-solving efforts.

Strategy 8. Communicate your enthusiasm for the outcomes facilitated by task engagement (e.g., deeper understanding; ability to use new knowledge outside school to help one's family, friends, or community). In doing so, you help create a learning setting where school work is perceived as instrumental to the achievement of students' goals and aspirations.

Strategy 9. As prior success is a key determinant of strong expectancies of future success, set up tasks in ways that make it easy for students to begin working on them. For example, make the first steps of a task accessible so that all/most students can tackle them without difficulties.

Strategy 10. Encourage students to acknowledge their own successes at task. Create a class environment in which students draw confidence from instances in which they did well to develop an "I can do" mindset about task engagement and performance. To do so, remind students that they are bright and resourceful and that obstacles can be overcome in different ways. Model consistently that you have full trust in their capabilities.

Strategy 11. Provide feedback on tasks in ways that make it easy for students to perceive missed steps, errors, or lack of progress as informative. To help them do so, illustrate frequently how specific feedback listed in marked assignments could be used to inform productive next steps in learning.

Strategy 12. To support students' motivation to learn and develop skills, promote an exploration mindset in your classes. To do so, focus on the malleable nature of skills/abilities and help students map how much they have learnt about a specific topic/issue. In addition, express constant optimism about everyone's ability to continue to learn, enhance their understanding, and strengthen their ability to use this new learning in ways that are fun, exciting, and beneficial.

Strategy 13. Prior knowledge is a potent catalyst for new learning. Introduce new topics in ways that help students link new information to what they already know. What students know encompasses not only knowledge they acquired in school, but also cultural knowledge and knowledge derived from life experiences or passed on by role models. Linking new and past knowledge has key benefits. First, it provides students with a solid foundation they use to strengthen their understanding and, thus, increases their confidence that they will do well. Second, it strengthens the relevance of the to-be-learned material, especially when students are encouraged to connect new

information to knowledge they acquired both within and outside school. (See also the next strategy.)

Strategy 14. When you introduce major tasks/assignments, give students opportunities (and time) to reflect upon how learning associated with these tasks could be beneficial to them, their families, and/or their community. To ensure the success of this strategy, use a combination of tactics: a) ask students to reflect upon and then write a short paragraph that explains to another student how learning about the given principles, concepts, or phenomena would be useful to them/their family/their community; and b) share with the class ideas that past students developed when reflecting upon the relevance of this task/assignment.

Strategy 15. Whenever possible, provide students with meaningful choices about their tasks/assignments. These could include the selection of intermediate steps/tasks, the delivery of the outcome of their learning (e.g., orally, in written form, as a performance, as a movie, etc.), and/or the opportunity to work on (some parts of) the task in groups or individually.

Strategy 16. Manage carefully the level of competitiveness in the class, as well as within and between working groups. While competition could be fun and motivating, it could also lead to high levels of emotional cost (e.g., frustration). In addition, in a competitive environment, students who have low expectancies of doing well and do not value the task/learning may become preoccupied to avoid failure and, thus, disengage from the task to avoid the disappointment of failure. Therefore, if you use games as part of your instructional approach, ensure that it is not always the same students or the same groups that win.

Strategy 17. Distractions are an important source of elevated perceptions of cost. For an example, take the case of a student who was asked to join in with friends exactly when she contemplates working on an assignment. In these circumstances, the student is likely to feel conflicted about doing the school work. In a similar vein, a student who works on an assignment while constantly checking notifications is not fully focused on task. As a result, his work is not efficient and will take longer than if he were to fully concentrate on his learning. Consequently, his perceptions of effort cost are likely to be elevated. To reduce perceptions of cost, encourage students to try to study in environments that are free of distractions. To be successful in this endeavour, work with students to identify the major sources of their distractions and support students to develop specific and precise plans about how they would go about reducing/eliminating these distractions. Be mindful that some students' circumstances may make it impossible to have a distraction-free study

space. When this is the case, work with the students to devise alternative plans. For example, for major assignments, book times/places in quiet zones of the school where students study before classes, after classes, in some breaks, etc.

Conclusion

Student motivation is pivotal for learning and achievement in school. Teachers play critical roles in creating learning environments that foster students' motivation to learn. To help teachers attain this key objective, this article proposed a set of research-based strategies teachers could use in their practice. These 17 strategies make suggestions on how teachers could support students' expectancies of success in their classes and strengthen their beliefs that engagement in learning-related tasks/activities is relevant and useful to them and their communities. In addition, the strategies offer ideas teachers could use to reduce students' perceptions that learning requires significant (or unbearable) emotional, effort, or opportunity costs.

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